REMARKS / ARGUMENTS

In the specification:

Paragraph [0007] has been amended to add antecedent language for proposed new claim language.

Paragraph [0012] has been amended to clarify language which distinguishes this claim from that outlined in Amita et al.

Paragraph [0025] has been amended to include Figure 2, which is a figure similar in nature to the cross-section observed in the provisional patent application.

Paragraph [0026] has been amended to provide linkage of Figure 2 to paragraph [0012].

No new matter is involved, in that a version of Figure 2 was present in the original provisional application, and the specification amendments are merely clarifications rather than new matter.

Claims 1-41 have been cancelled. New claims 42-48 have been added.

The Examiner rejected claims 1-7, 40 and 41 as anticipated by Amita et al.; claims 9-14, 17, 29-32 and 34-39 as unpatentable over Amita et al. in view of Saperstein; claims 15, 16 and 18-21 as unpatentable over Amita et al. in view of Tadauchi et al.; and claims 23-28 as unpatentable over Amita et al. in view of Tadauchi et al. and further in view of Saperstein.

With respect to the anticipation rejection of claims 1-7, 40 and 41, the Examiner argued that "Amita teaches a method of joining an aluminum fin folded assembly to a copper plate to form a heat sink..." However, Applicant notes that the heat sink in Amita et al. is not a folded-fin heat sink at all, but merely an extruded aluminum fin block which is soldered to a copper base. It suggested by Applicant that the method described in Amita et al. likely does not work very effectively, since it depends on close contact between abutting planar surfaces. Given normal manufacturing tolerances and warpage, two rigid planar surfaces cannot be considered

perfectly planar, and are not likely to contact each other across all of the desired area, thereby reducing the effectiveness of the soldered joint and its heat transfer effectiveness. Furthermore, by contrast with folded fin designs, joint control isn't facilitated by enabling the flow of excess liquidus solder to appropriate areas.

In any event, Applicant has now cancelled claims 1-41, and instead is presenting new claims 42-48. The new claims are product and product-by-process claims instead of method claims, since that would appear to be a more appropriate type of claim to emphasize the structural differences in this case. Neither Amita et al. nor any of the other references teach or suggest a structure such as the structure of new claim 42. It is submitted that an aluminum folded-fin heat sink assembly soldered to a copper base with a Sn-Zn solder produces a heat sink which is both novel and inventive over any of the prior art.

The Examiner indicated that claims 8, 22 and 33 would be allowable if rewritten in independent form. These claims recited the copper base being nickel plated. In the new claims, that feature is recited in claim 48, which therefore ought to be allowable.

In view of the above remarks, it is submitted that the application is now in condition for allowance of new claims 42-48, which is respectfully requested.

Respectfully submitted,

By: 

R. Craig Armstrong
Registration No. 30,910
Attorney for Applicant

Borden Ladner Gervais LLP
100 Queen Street
Ottawa, Ontario
Canada K1P 1J9

Telephone: 519-741-9100
Fax: 519-741-9149